

Serial No. 09/748698

- 2 -

Art Unit: 2157

In the claims:

1. (currently amended) A method for facilitating hand-off of a wireless terminal device to a first wireless access point from a second wireless access point maintaining a communication session in a communication system in which a wireless terminal device communicates via at least one of a plurality of wireless access point devices, the method comprising:

determining that the communication session connectivity between the terminal device and the second wireless access point has or will be disrupted;

saving state information relating to the communication session connectivity between the terminal device and the second wireless access point in a back end device operatively connected with each of the access point devices, the back end device operable to contemporaneously save state information relating to multiple communication sessions associated with multiple wireless access point devices; and

subsequently re-establishing the communication session using the saved state information by communicating the saved state information from the back end device to the first one of the wireless access point devices; and

utilizing the saved state information by the first wireless access point, to facilitate establishment of an association between the terminal device and the first wireless access point.

2. (original) The method of claim 1, wherein determining that the communication session has or will be disrupted comprises:

determining that the communication session has failed.

3. (original) The method of claim 1, wherein determining that the communication session has failed comprises:

monitoring for a predetermined signal; and

failing to receive the predetermined signal for a predetermined amount of time.

4. (previously presented) The method of claim 1, wherein determining that the communication session has or will be disrupted comprises:

determining that disrupting the communication session is necessary or desirable.

Serial No. 09/748698

- 3 -

Art Unit: 2157

5. (original) The method of claim 1, wherein saving the state information relating to the communication session comprises:

saving the state information for up to a predetermined amount of time.

6. (previously presented) The method of claim 1, wherein the communication session is associated with a first access point device and wherein re-establishing the communication session using the saved state information comprises reestablishing the communication through the first access point device.

7. (previously presented) The method of claim 1, wherein the communication session is associated with a first access point device, and wherein re-establishing the communication session using the saved state information comprises reestablishing the communication session through a different access point device.

8. (original) The method of claim 7, wherein re-establishing the communication session through the different access point device comprises:

associating the state information with the different access point device.

9. (original) The method of claim 1, wherein the communication session comprises a Bluetooth communication session.

10. (currently amended) A device for facilitating hand-off of a wireless terminal device to a first wireless access point from a second wireless access point maintaining a communication session in a network in which a wireless terminal device communicates via at least one of a plurality of wireless access point devices, the device comprising:

session monitoring logic operably coupled to determine that the communication session connectivity between the terminal device and the second wireless access point has or will be disrupted;

Serial No. 09/748698

- 4 -

Art Unit: 2157

state maintenance logic operably coupled to save state information relating to connectivity between the terminal device and the second wireless access point from the access point device relating to the communication session, the state maintenance logic operable to contemporaneously save state information relating to multiple communication sessions associated with multiple wireless access point devices; and

communication logic session re-establishment logic operably coupled to communicate subsequently reestablish the communication session using the saved state information by communicating the saved state information to one of the first wireless access point devices;

whereby the first wireless access point can utilize the saved state information to facilitate establishment of an association between the terminal device and the first wireless access point.

11. (original) The device of claim 10, wherein the session monitoring logic is operably coupled to determine that the communication session has failed.

12. (original) The device of claim 11, wherein the session monitoring logic is operably coupled to monitor for a predetermined signal and determine that the communication session has failed upon failing to receive the predetermined signal for a predetermined amount of time.

13. (previously presented) The device of claim 10, wherein the session monitoring logic is operably coupled to determine that disruption of the communication session is necessary or desirable.

14. (original) The device of claim 10, wherein the state maintenance logic is operably coupled to save the state information for up to a predetermined amount of time.

15. (original) The device of claim 10, wherein the communication session is associated with an access point device, and wherein the session re-establishment logic is operably coupled to re-establish the communication session through the access point device using the saved state information.

Serial No. 09/748698

- 5 -

Art Unit: 2157

16. (original) The device of claim 10, wherein the communication session is associated with an access point device, and wherein the session re-establishment logic is operably coupled to re-establish the communication session through a different access point device using the saved state information.

17. (original) The device of claim 16, wherein the session re-establishment logic is operably coupled to associate the state information with the different access point device.

18. (original) The device of claim 10, wherein the communication session comprises a Bluetooth communication session.

19. (original) The device of claim 10, wherein the device is a back end device that implements upper protocol layers of a wireless communication protocol.

20. (currently amended) A computer program for facilitating hand-off of a wireless terminal device to a first wireless access point from a second wireless access point controlling a computer system to maintain a communication session in a network in which a wireless terminal device communicates via at least one of a plurality of wireless access point devices, the computer program comprising:

session monitoring logic programmed to determine that the communication session connectivity between the terminal device and the second wireless access point has or will be disrupted;

state maintenance logic programmed to save state information relating to the communication session connectivity between the terminal device and the second wireless access point, the state maintenance logic operable to contemporaneously save state information relating to multiple communication sessions associated with multiple wireless access point devices; and communication logic session re-establishment logic programmed to communicate subsequently reestablish the communication session using the saved state information to the first wireless access point;

Serial No. 09/748698

- 6 -

Art Unit: 2157

whereby the first wireless access point can utilize the saved state information to facilitate establishment of an association between the terminal device and the first wireless access point.

21. (original) The computer program of claim 20, wherein the session monitoring logic is programmed to determine that the communication session has failed.
22. (original) The computer program of claim 21, wherein the session monitoring logic is programmed to monitor for a predetermined signal and determine that the communication session has failed upon failing to receive the predetermined signal for a predetermined amount of time.
23. (previously presented) The computer program of claim 20, wherein the session monitoring logic is programmed to determine whether disruption of the communication session is necessary or desirable.
24. (original) The computer program of claim 20, wherein the state maintenance logic is programmed to save the state information for up to a predetermined amount of time.
25. (original) The computer program of claim 20, wherein the communication session is associated with an access point device and wherein the session re-establishment logic is programmed to re-establish the communication session through the access point device using the saved state information.
26. (original) The computer program of claim 20, wherein the communication session is associated with an access point device, and wherein the session reestablishment logic is programmed to re-establish the communication session through a different access point device using the saved state information.
27. (original) The computer program of claim 26, wherein the session re-establishment logic is programmed to associate the state information with the different access point device.

Serial No. 09/748698

- 7 -

Art Unit: 2157

28. (original) The computer program of claim 10, wherein the communication session comprises a Bluetooth communication session.

29. (original) The computer program of claim 20, further comprising: protocol logic for implementing upper protocol layers of a wireless communication protocol.

30. (currently amended) A communication system that facilitates hand-off of a wireless terminal device to a first wireless access point from a second wireless access point comprising a number of wireless access point devices, including the first and second wireless access points, that each implement a first protocol layer of a wireless communication protocol and a back end device that implements a second protocol layer of the wireless communication protocol on behalf of the number of access point devices, wherein the back end device is operably coupled to save state information for a relating to connectivity of a communication session between the terminal device and the second wireless access point upon determining that the communication session connectivity has or will be disrupted and subsequently to communicate re-establish the communication session using the saved state information the first access point, the back end device operable to contemporaneously save state information relating to multiple communication sessions associated with multiple wireless access point devices;

whereby the first wireless access point can utilize the saved state information to facilitate establishment of an association between the terminal device and the first wireless access point.

31. (original) The communication system of claim 30, wherein the communication session is associated with an access point device, and wherein the back end device is operably coupled to re-establish the communication session through the access point device.

32. (original) The communication system of claim 30, wherein the communication session is associated with an access point device, and wherein the back end device is operably coupled to re-establish the communication session through a different access point device.

Serial No. 09/748698

- 8 -

Art Unit: 2157

33. (original) The communication system of claim 32, wherein the back end device is operably coupled to associate the saved state information with the different access point device.

34. (original) The communication system of claim 30, wherein the wireless communication protocol comprises a Bluetooth wireless communication protocol.

35. (original) The communication system of claim 34, wherein the first protocol layer is a lower protocol layer of the Bluetooth wireless communication protocol, and wherein the second protocol layer comprises an upper protocol layer of the Bluetooth wireless communication protocol.

36. (original) The communication system of claim 30, wherein the communication session is associated with a terminal equipment device that communicates with the back end device through an access point device, and wherein the back end device is operably coupled to determine that the communication session is disrupted upon failing to receive a predetermined signal from the terminal equipment device for a predetermined amount of time.

37. (currently amended) In a communication system in which a terminal device accesses a communication network through one of a plurality of wireless access point devices that implement a first protocol layer of a wireless communication protocol and a back end device that implements a second protocol layer of the wireless communication protocol, a method for moving the terminal device from a first access point device to a second access point device, the method comprising:

saving state information for the terminal device by the back end device, the state information relating to connectivity of a communication session between the terminal device and the first wireless access point, the back end device operable to contemporaneously save state information relating to multiple communication sessions associated with multiple wireless access point devices;

terminating communication with the terminal device over the first access point device;

Serial No. 09/748698

- 9 -

Art Unit: 2157

communicating the saved state information from the back end device to the second wireless access point; and
utilizing the saved state information, by the second wireless access point, to facilitate establishment of an association between the terminal device and the second wireless access point and
re-establishing communication with the terminal device over the second access point device using the saved state information.

38. (original) The method of claim 37, wherein the first access point device is congested, and wherein re-establishing communication with the terminal device over the second access point device using the saved state information is done to avoid the congestion at the first access point device.

39. (original) The method of claim 37, wherein re-establishing communication with the terminal device over the second access point device using the saved state information is done for load balancing purposes to split network traffic between the first access point device and the second access point device.

40. (original) The method of claim 37, wherein the first access point device and the second access point device are in different service provider systems/ and wherein re-establishing communication with the terminal device over the second access point device using the saved state information is done to move the terminal device to a predetermined service provider system.

41. (original) The method of claim 37, wherein re-establishing communication with the terminal device over the second access point device using the saved state information is done for cost purposes to move the terminal device to a less expensive access point device.

42. (currently amended) In a communication system in which a terminal device accesses a communication network through one of a plurality of wireless access point devices that implement a first protocol layer of a wireless communication protocol and a back end device that implements

Serial No. 09/748698

- 10 -

Art Unit: 2157

a second protocol layer of the wireless communication protocol method for using state information related to connectivity of a communication session between the terminal device and the first wireless access point, the method comprising:

 saving the state information related to connectivity for the terminal device by the back end device, the back end device operable to contemporaneously save state information relating to multiple communication sessions associated with multiple wireless access point devices; and

 using the saved information to facilitate establishment of connectivity with a second wireless access point.

43. (original) The method of claim 42, wherein using the saved information comprises:

 using the saved information for accounting purposes.

44. (original) The method of claim 42, wherein using the saved information comprises:

 using the saved information for network management purposes.

45. (original) The method of claim 42, wherein using the saved information comprises:

 using the saved information for user tracking purposes.

46. (original) The method of claim 42, wherein using the saved information comprises:

 using the saved information for user locating purposes.